

REMARKS

Applicant wishes to thank the Examiner for considering the present application. In the Office Action dated June 28, 2004, claims 1-33 are pending in the application. Applicant respectfully requests the Examiner to reconsider the rejection.

Claims 1-33 stand rejected under 35 U.S.C. §102(e) as being clearly anticipated by *Goodzeit* (US 2004/0069905). Applicant respectfully traverses.

For a proper §102(e) rejection, each and every element of the claims must be present in the cited reference. Applicant respectfully submits that each and every element of the claims of the present application are not found in the cited reference.

In the present application, a common thread throughout is that prior to a disturbance the spacecraft is commanded to be pre-positioned so that after the disturbance the spacecraft is positioned in to its desired orientation. In claim 1 this is set forth by "...prior to the disturbance, said controller controlling the biasing apparatus to place the spacecraft in a first dynamic state as a function of the known sign, magnitude and time ...so that the spacecraft is oriented in a position other than a desired orientation so that after the disturbance the spacecraft is oriented in the desired orientation in response to the disturbance."

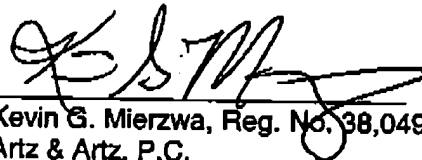
Claim 10 is similar, but in method form. Claims 18 and 26 contain similar but more detailed limitations. For example, claim 18 recites "commanding the spacecraft to move from a first position to an angular offset equal to an allowable transient angular excursion opposite in direction to a transient from the disturbance when torque is unloaded from a momentum wheel." A series of moves are performed and ultimately the step of "slewing the spacecraft to the first position" is performed. The method includes "commanding a thruster to apply an impulse to the wheel twice the size of that required to halt the slewing."

The *Goodzeit* reference is directed to a system for high efficiency REA optimized stationkeeping. The Examiner points to paragraphs 22 and 31. Paragraph 31 specifically refers to Fig. 4. Applicant respectfully submits that Fig. 4 clearly illustrates the differences between the *Goodzeit* reference and the present claims. As can be seen at time T_0 the spacecraft has an initial momentum. Lines 48a and 48c represent the momentum trajectory attributable to torque errors in the ΔV thrusters. The dashed line 48b represents the momentum correction by a controller. As can be seen, the momentum correction is performed after the initial time T_0 so that some error starts to accumulate. The present claims each recite that the spacecraft is commanded to a position prior to a disturbance. Thus, the *Goodzeit* reference and the claims of the present application are very different. Therefore, because each and every element of the independent claims are not found in the *Goodzeit* reference, applicant respectfully requests the

Examiner for a reconsideration of this rejection. Further, each of the dependent claims contain further limitations of their base claims and therefore are also believed to be allowable for the same reasons set forth above.

In light of the above remarks, applicant submits that all rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments which would place the application in better condition for allowance, he is respectfully requested to call the undersigned attorney. Please charge any fees required in the filing of this amendment to Deposit Account No. 50-0476.

Respectfully submitted,



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